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12-8-04

Date of Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In the Application of: )  
RAMESH LHILA, et al. ) Examiner: Hai Vo  
for: ACRYLIC FOAM-LIKE TAPE ) Group Art Unit: 1771  
Serial No.: 09/898,969 )  
Filed: July 3, 2001 ) Our Docket No. 6001-0044-1

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF**

Dear Sir:

This is an appeal to the Board of Appeals from an Office Action mailed March 31, 2004 marked "final" and the subsequent Advisory Action mailed October 15, 2004, in which the Examiner finally rejected claims 1-20 of the above-identified application. Appellants timely filed a Notice of Appeal at the U.S. Patent and Trademark Office on September 30, 2004. Therefore, the due date for filing the Appeal Brief is November 30, 2004. This brief is being filed in support of that Notice of Appeal.

As required by 37 C.F.R. §1.192, this brief is being filed in triplicate.

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I. REAL PARTY IN INTEREST

The real party in interest in this Appeal is Scapa Tapes North America, Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interference proceedings known to Appellants, Appellants' legal representatives, or assignees that would directly affect or be directly affected by or have a bearing on the decision of the Board of Patent Appeals and Interferences in this Appeal.

III. STATUS OF CLAIMS

Claims 1-20 are pending. Claims 1-20 have been finally rejected.

IV. STATUS OF AMENDMENTS

Proposed amendments to claims 1, 2, 4, 8-10, 12, 18, and 19 were submitted on September 30, 2004, in response to the final Office Action. In the Advisory Action dated October 15, 2004, the Examiner indicated that the proposed amendments would be entered, and an explanation of how the new or amended claims would be rejected was provided.

V. SUMMARY OF INVENTION

The present invention is directed to an acrylic pressure-sensitive adhesive tape comprising a layer of an acrylic backing, at least one layer of a pressure-sensitive adhesive disposed on at least one side of the layer of the acrylic backing, and a primer layer disposed between the layer of the acrylic backing and the layer of the pressure sensitive adhesive. (Application, paragraph 24.) The acrylic backing comprises from about 88% by weight to about 92% by weight of an acrylic polymer and from about 8% by weight to about 12% by weight of hollow glass microspheres dispersed evenly in the polymer. The acrylic polymer comprises from about 35% by weight to about 45% by weight of a first alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms; from about 30% by weight to about 40% by weight of a second alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms, wherein the second alkyl acrylate monomer is independent from the first alkyl acrylate monomer; from about 6% by weight to about 10% by weight of a first

monoethylenically unsaturated polar copolymerizable monomer; and from about 1% by weight to about 2% by weight of a second monoethylenically unsaturated polar copolymerizable monomer, wherein the second monoethylenically unsaturated polar copolymerizable monomer is independent from the first monoethylenically unsaturated polar copolymerizable monomer. (Application, paragraph 34.) The primer layer comprises a primer selected from the group of primers consisting of polyamide solution, polyamide emulsion, nitrile rubber based solution, nitrile rubber based emulsion, natural rubber based solution, natural rubber based emulsion, ethylene-propylene copolymer rubber based solution, ethylene-propylene copolymer rubber based emulsion, ethylene-propylene-diene monomer terpolymer rubber based solution, ethylene-propylene-diene monomer terpolymer rubber based emulsion, poly(ethylene-co-vinyl acetate) solution, poly(ethylene-co-vinyl) acetate emulsion, poly(ethylene-co-vinyl acetate and alcohol) solution, poly(ethylene-co-vinyl acetate and alcohol) emulsion, silane modified rubber solutions, and silane modified elastomer solutions. (Application, paragraph 56).

## VI. ISSUES

The issue is whether claims 1-20 are patentable within the meaning of 35 U.S.C. §103(a).

## VII. GROUPING OF CLAIMS

- A. Claims 1-8, 11-14, and 18 stand or fall together.
- B. Claims 9, 10, 15, and 16 stand or fall together.
- C. Claims 17 and 20 stand or fall together.
- D. Claim 19 stands or falls alone.

## VIII. ARGUMENT

### **A. Claims 1-20 are patentable within the meaning of 35 U.S.C. §103(a).**

1. The Examiner's rejection of claims 1-8, 11-14, and 18 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,612,136 to Everaerts et al. (hereinafter "Everaerts") in view of U.S. Patent No. 5,503,927 to Ragland et al. (hereinafter "Ragland") as evidenced by U.S. Patent No. 3,707,521 to De Santis (hereinafter "De Santis") is improper.

The Examiner has improperly rejected independent claim 1.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. The Examiner can satisfy this burden only by showing some objective teaching in the cited documents of record that would lead an individual of ordinary skill in the art to combine the relevant teachings of the references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). This the Examiner has not done.

As noted above, the invention as defined by claim 1 is directed to an acrylic pressure-sensitive adhesive tape comprising a layer of an acrylic backing, at least one layer of a pressure-sensitive adhesive disposed on at least one side of the layer of the acrylic backing, and a primer layer disposed between the layer of the acrylic backing and the layer of the pressure sensitive adhesive.

In contrast, Everaerts is directed to a pressure sensitive adhesive having improved adhesion to acid-rain resistant automotive paints. The adhesive comprises a cross-linked copolymer comprising at least one monomer selected from the group consisting of monofunctional unsaturated meth(acrylate) esters, a nitrogen-containing basic monomer that is copolymerizable with the ester(s), an optional copolymerizable acidic monomer, and a cross-linking agent.

Ragland is directed to polymer-pressure sensitive adhesive combinations, particularly in the form of laminates, and methods of producing such combinations. In the combinations, the bond strength of the pressure sensitive adhesive to the polymer layer is improved by priming the polymer surface with a urethane primer before the application of the adhesive to the polymer surface. The polymer surface may be activated using a silicon-containing treating agent (if necessary) to accept the urethane

primer. In one aspect, the laminate comprises a polymeric layer, a coating of urethane on the surface of the polymeric layer, and a pressure sensitive adhesive applied to the coated surface. The polymeric layer may be elastomeric (e.g., silicone foam, EPDM, PVC, perfluoroethylene, vinylidene fluoride, or the like).

De Santis is directed to a polyurethane sealant-primer system having an isocyanate-reactive surface primer composition and a moisture-curable polyurethane sealant composition. The isocyanate-reactive surface primer composition comprises an aliphatic silane; carbon black; one of chlorinated rubber, PVC, polyacrylate resins, and polyester resins; a condensation product of toluene diisocyanate and hexamethylene diisocyanate; a catalyst; and an organic solvent.

As stated by the Examiner, Everaerts does not disclose a composition of a primer layer. (Office Action mailed March 31, 2004, page 3.)

There is no teaching, suggestion, or motivation to combine Everaerts with Ragland and De Santis to arrive at the invention as recited in claim 1. The invention of Everaerts is derived in response to a need for providing adhesion to acid-rain resistant automobile coatings having acidic characteristics. (Everaerts, column 3, lines 36-40.) More specifically, the Everaerts invention is directed to the use of an adhesive to mount a device to a surface. The invention of Ragland, on the other hand, is derived in response to the alleged long-existing problem of inadequate bond strength that results from conventional lamination of a layer of a pressure sensitive adhesive to a silicone foam sheet. (Ragland, column 3, lines 27-31.) More specifically, the Ragland invention is directed to maintaining the integrity of the pressure sensitive adhesive (in tape form) itself. In short, Ragland is directed to the manufacture of tape and appears not to be concerned with the use of the tape to bind two objects. De Santis is relied on by the Examiner to teach that the primer of Ragland may be a silane-modified elastomer solution. The use of an adhesive to mount a device to a surface is not indicative of the structural integrity of a tape, and one of skill in the art would not look to combining an adhesive for adhering objects to surfaces having acidic characteristics with devices having adhesives directed to improving bond strength within the device.

Absent any teaching, suggestion, or motivation to combine the cited documents, such combinations are made by hindsight and are impermissible. For at least the reason presented above, the combination of Everaerts with Ragland as evidenced by De Santis does not teach, suggest, or motivate one of skill in the art to arrive at the invention

recited in claim 1. Thus, the combination of Everaerts with Ragland is not proper. Because the combination is not proper and could have only come from hindsight reasoning, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, Appellants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of independent claim 1.

Moreover, any claim that depends from a claim that is non-obvious is itself necessarily non-obvious. Claims 2-8, 11-14, and 18 depend from claim 1, which is asserted to be non-obvious for the reasons presented above. Thus, claims 2-8, 11-14, and 18 are themselves necessarily non-obvious. Appellants respectfully request reversal of the Section 103(a) rejection of claims 2-8, 11-14, and 18 on these grounds.

2. The Examiner's rejection of claims 9, 10, 15, and 16 under 35 U.S.C. §103(a) as allegedly being unpatentable over Everaerts in view of Ragland as evidenced by De Santis, as applied to claim 1, further in view of U.S. Patent No. 5,308,887 to Ko et al. (hereinafter "Ko") is improper.

The teachings of Everaerts, Ragland, and De Santis are presented above.

As stated above, there is no teaching, suggestion, or motivation to combine Everaerts with Ragland and De Santis to arrive at the invention as recited in claim 1. Claim 1, the sole independent claim in the application, therefore, is asserted to be non-obvious for at least the reasons presented above.

Ko is directed to a radiation-curable pressure sensitive adhesive tape that includes a foam layer comprising about 80 parts to about 99 parts of an alkyl acrylate monomer, and correspondingly, about 20 parts to about 1 part of a copolymerizable modifier monomer. The foam layer may include a gas and/or microspheres as well as fillers. The foam layer is used in conjunction with a hybrid acrylate/silicone pressure sensitive adhesive. The Examples of Ko refer to the foam layer being primed prior to a tape being adhered to the foam layer.

While the Examiner relies on Ko to provide basis for the silica and the hydrophobic silica used as filler in the core layer, Ko fails to disclose, teach, or suggest a specific primer layer or a composition for a primer. Thus, Ko fails to disclose teach or suggest any limitations that, when combined with Everaerts, Ragland, and De Santis, result in the invention as recited in claim 1.

As stated above, absent any teaching, suggestion, or motivation to combine the cited documents, such combinations are made by hindsight and are impermissible. For at least the reason presented above, the combination of Everaerts with Ragland as evidenced by De Santis does not teach, suggest, or motivate one of skill in the art to arrive at the invention recited in claim 1. Thus, the combination of Everaerts with Ragland is not proper. Because Ko does not add to the combination of Everaerts and Ragland for the purpose of arriving at the invention recited in claim 1 and because the combination of Everaerts and Ragland is still not proper, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, Appellants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of independent claim 1.

Moreover, any claim that depends from a claim that is non-obvious is itself necessarily non-obvious. Claims 9, 10, 15, and 16 depend from claim 1, which is asserted to be non-obvious for the reasons presented above. Thus, claims 9, 10, 15, and 16 are themselves necessarily non-obvious. Appellants respectfully request reversal of the Section 103(a) rejection of claims 9, 10, 15, and 16 on these grounds.

3. The Examiner's rejection of claims 17 and 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over Everaerts in view of Ragland as evidenced by De Santis, as applied to claim 1, further in view of U.S. Patent No. 5,264,278 to Mazurek et al. (hereinafter "Mazurek") is improper.

The teachings of Everaerts, Ragland, De Santis, and Ko are presented above.

As stated above, there is no teaching, suggestion, or motivation to combine Everaerts with Ragland, De Santis, and Ko to arrive at the invention as recited in claim 1. Claim 1, the sole independent claim in the application, therefore, is asserted to be non-obvious for at least the reasons presented above.

Mazurek is directed to a hybrid pressure sensitive adhesive tape product comprising a pressure sensitive layer comprising a silicone, a polymerizable vinyl monomer, a silicate tackifying resin, and a foam layer. The tackifying resin comprises a sufficient amount of a silicate-MQ to impart a degree of adhesive tack to the cured composition. Mazurek further teaches the cross-linking of the adhesive composition as well as the foam layer as disclosed in Ko.

The Examiner relies on Mazurek as allegedly supplying the features missing from Everaerts to result in the present invention recited in claim 1. Mazurek fails to teach a primer layer.

As stated above, absent any teaching, suggestion, or motivation to combine the cited documents, such combinations are made by hindsight and are impermissible. For at least the reason presented above, the combination of Everaerts with Ragland as evidenced by De Santis does not teach, suggest, or motivate one of skill in the art to arrive at the invention recited in claim 1. Thus, the combination of Everaerts with Ragland is not proper. Furthermore, because neither Ko nor Mazurek adds to the combination of Everaerts and Ragland for the purpose of arriving at the invention recited in claim 1 and because the combination of Everaerts and Ragland is still not proper, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, Appellants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of independent claim 1.

Moreover, any claim that depends from a claim that is non-obvious is itself necessarily non-obvious. Claims 17 and 20 depend from claim 1, which is asserted to be non-obvious for the reasons presented above. Thus, claims 17 and 20 are themselves necessarily non-obvious. Appellants respectfully request reversal of the Section 103(a) rejection of claims 17 and 20 on these grounds.

4. The Examiner's rejection of claim 19 under 35 U.S.C. §103(a) as allegedly being unpatentable over Everaerts in view of Ragland as evidenced by De Santis, as applied to claim 1, further in view of Ko and Mazurek is improper.

The teachings of Everaerts, Ragland, De Santis, Ko, and Mazurek are presented above.

As stated above, there is no teaching, suggestion, or motivation to combine Everaerts with Ragland, De Santis, Ko, and Mazurek to arrive at the invention as recited in claim 1. Claim 1, the sole independent claim in the application, therefore, is asserted to be non-obvious for at least the reasons presented above.

As stated above, absent any teaching, suggestion, or motivation to combine the cited documents, such combinations are made by hindsight and are impermissible. For at least the reason presented above, the combination of Everaerts with Ragland as



evidenced by De Santis does not teach, suggest, or motivate one of skill in the art to arrive at the invention recited in claim 1. Thus, the combination of Everaerts with Ragland is not proper. Furthermore, because neither Ko nor Mazurek adds to the combination of Everaerts and Ragland for the purpose of arriving at the invention recited in claim 1 and because the combination of Everaerts and Ragland is still not proper, the Examiner has failed to establish a *prima facie* case of obviousness. Therefore, Appellants respectfully request reconsideration and withdrawal of the Section 103(a) rejection of independent claim 1.

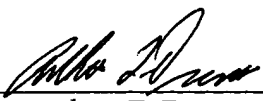
Moreover, any claim that depends from a claim that is non-obvious is itself necessarily non-obvious. Claim 19 depends from claim 1, which is asserted to be non-obvious for the reasons presented above. Thus, claim 19 itself is necessarily non-obvious. Appellants respectfully request reversal of the Section 103(a) rejection of claim 19 on these grounds.

**B. Conclusion**

For the reasons discussed above, this application is in a condition for allowance and thus reversal of the outstanding rejections and allowance of the application is appropriate.

Please charge Deposit Account No. 13-0235 in the amount of \$340 to cover the fee for filing this Appeal Brief. No additional fees or deficiencies in fees are believed to be owed. However, authorization is hereby granted to charge the above-identified deposit account in the event any such fees are owed.

Respectfully submitted,

By  12/6/04  
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APPENDIX:

Listing of Current Claims:

1. An acrylic pressure-sensitive adhesive tape comprising:
  - (a) a layer of an acrylic backing comprising
    - (i) from about 88% by weight to about 92% by weight of an acrylic polymer comprising:

from about 35% by weight to about 45% by weight of a first alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms,  
from about 30% by weight to about 40% by weight of a second alkyl acrylate monomer having alkyl groups which contain from 4 to 12 carbon atoms, wherein said second alkyl acrylate monomer is independent from said first alkyl acrylate monomer,  
from about 6% by weight to about 10% by weight of a first monoethylenically unsaturated polar copolymerizable monomer, and  
from about 1% by weight to about 2% by weight of a second monoethylenically unsaturated polar copolymerizable monomer, wherein said second monoethylenically unsaturated polar copolymerizable monomer is independent from said first monoethylenically unsaturated polar copolymerizable monomer; and
    - (ii) from about 8% by weight to about 12% by weight of hollow glass microspheres dispersed evenly in said polymer;
  - (b) at least one layer of a pressure-sensitive adhesive disposed on at least one side of said layer of said acrylic backing; and
  - (c) a primer layer disposed between said layer of said acrylic backing and said layer of said pressure sensitive adhesive, said primer layer comprising a primer selected from the group of primers consisting of polyamide solution, polyamide emulsion, nitrile rubber based solution, nitrile rubber based emulsion, natural rubber based solution, natural rubber based emulsion, ethylene-propylene copolymer rubber based solution, ethylene-propylene copolymer rubber based emulsion, ethylene-propylene-diene monomer terpolymer rubber based solution, ethylene-propylene-diene monomer terpolymer rubber based emulsion, poly(ethylene-co-vinyl acetate)

solution, poly(ethylene-co-vinyl) acetate emulsion, poly(ethylene-co-vinyl acetate and alcohol) solution, poly(ethylene-co-vinyl acetate and alcohol) emulsion, silane modified rubber solutions, and silane modified elastomer solutions.

2. The acrylic pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 0.33% by weight to about 0.5% by weight of initiator.
3. The acrylic pressure-sensitive adhesive tape according to claim 2, wherein the initiator comprises at least one photoinitiator.
4. The acrylic pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 0.05% by weight to about 0.07% by weight of a crosslinker/ chain extender.
5. The acrylic pressure-sensitive adhesive tape according to claim 4, wherein the crosslinker/ chain extender is a multifunctional acrylate.
6. The acrylic pressure-sensitive adhesive tape according to claim 4, wherein the crosslinker/ chain extender is a multi-ethylenically unsaturated copolymerizable monomer containing at least two carbon-carbon double bonds.
7. The acrylic pressure-sensitive adhesive tape according to claim 4, wherein: the crosslinker/ chain extender is taken from the group consisting of ethylene glycol diacrylate, triethylene glycol diacrylate, 1,4-butanediol diacrylate, 1,6-hexanediol diacrylate, trimethylolpropane triacrylate, pentaerythritol triacrylate, tetraethylene glycol diacrylate, methacrylates, and combinations thereof.
8. The acrylic pressure-sensitive adhesive tape according to claim 1, wherein the acrylic polymer includes from about 1% by weight to about 2% by weight of a filler.
9. The acrylic pressure-sensitive adhesive tape according to claim 8, wherein said filler is a fumed silica.

10. The acrylic pressure-sensitive adhesive tape according to claim 8, wherein said filler is a surface modified silica.
11. The acrylic pressure-sensitive adhesive tape according to claim 1, wherein:
  - the first alkyl acrylate monomer is isooctylacrylate,
  - the second alkyl acrylate monomer is 2-ethylhexyl acrylate,
  - the first monoethylenically unsaturated polar copolymerizable monomer is acrylic acid,
  - the second monoethylenically unsaturated polar copolymerizable monomer is acrylamide, and
  - the hollow glass microspheres are borosilicate glass.
12. The acrylic pressure-sensitive adhesive tape according to claim 11, wherein the acrylic polymer further comprises:
  - from about 0.3% by weight to about 0.5% by weight of initiator,
  - from about 1% by weight to about 2% by weight of a filler, and
  - from about 0.05% by weight to about 0.07% by weight of a crosslinker/chain extender.
13. The acrylic pressure-sensitive adhesive tape according to claim 12, wherein the initiator comprises at least one photoinitiator.
14. The acrylic pressure-sensitive adhesive tape according to claim 13, wherein the photoinitiator is benzoin ethyl ether.
15. The acrylic pressure-sensitive adhesive tape according to claim 11, wherein the filler is fumed silica.
16. The acrylic pressure-sensitive adhesive tape according to claim 11, wherein the filler is a surfaced modified silica.
17. The acrylic pressure-sensitive adhesive tape according to claim 11, wherein the

crosslinker/ chain extender is 1,4 butanediol diacrylate.

18. The acrylic pressure-sensitive adhesive tape according to claim 11, wherein the acrylic backing comprises:

- from about 40% by weight to about 41% by weight isooctylacrylate;
- from about 36% by weight to about 37% by weight 2-ethylhexyl acrylate;
- from about 8% by weight to about 9% by weight acrylic acid;
- from about 1% by weight to about 2% by weight acrylamide; and from about 10% by weight to about 11% by weight borosilicate glass.

19. The acrylic pressure-sensitive adhesive tape according to claim 18, wherein the acrylic backing further comprises:

- from about 0.35% by weight to about 0.45% by weight benzoin ethyl ether;
- from about 1% by weight to about 2% by weight fumed silica; and
- from about 0.055% by weight to about 0.065% by weight 1,4 butanediol diacrylate.

20. The acrylic pressure-sensitive adhesive tape according to claim 1, wherein the backing further comprises:

- a sufficient amount of colorant to impart color to the adhesive tape.

21-42. (Cancelled)